

WHAT IS CLAIMED IS:

1. An active type of display panel having a plurality of pixel portions which are each formed by a series circuit having a light-emitting element and a driving element and divided into a plurality of groups, the display panel comprising:
 - a reference potential line connected to one ends of the series circuits of the plurality of pixel portions;
 - a first power line provided in common for the plurality of pixel portions; and
 - a second power line provided for each of the plurality of groups;wherein each of the plurality of pixel portions has a switch device for electrically connecting between the other end of the series circuit and the first power line, and electrically connecting between the other end of the series circuit and the second power line of a corresponding group of the plurality of pixel portions.
2. A display panel according to claim 1, wherein the switch device includes a first switch element provided between the other of the series circuit and the first power line and a second switch element provided between the other end of the series circuit and the second power line of the corresponding group of the plurality of pixel portions.
3. A display panel according to claim 1, further comprising a plurality of data lines arranged as columns corresponding to the plurality of groups and a plurality of scanning lines arranged in rows to intersect with the plurality of data lines,

wherein the pixel portions are arranged at the respective intersections between the plurality of data lines and the plurality of scanning lines, and

wherein each of the plurality of pixel portions has a capacitor,

a first field-effect transistor as the driving element having a gate and a source between which the capacitor is connected,

an organic electroluminescent element as the light-emitting element having an anode connected to a drain of the first field-effect transistor and a cathode connected to the referential potential line,

a second field-effect transistor having a gate connected to the scanning line on a corresponding row of the plurality of scanning lines, a source connected to the data line on a corresponding column of the plurality of data lines and a drain connected to the gate of the first field-effect transistor,

a third field-effect transistor having a gate connected to the scanning line on the corresponding row, a source connected to the second power line on the corresponding column and a drain connected to the source of the first field-effect transistor, and

a fourth field-effect transistor having a gate which is at a level inverted of a level on the gate of the third field-effect transistor, a source connected to the first power line and a drain connected to the source of the first field-effect transistor.

4. A display device comprising:

an active type of display panel having a plurality of data

lines arranged in columns, a plurality of scanning lines arranged in rows to intersect with the plurality of data lines, and pixel portions arranged at the respective intersections between the plurality of data lines and the plurality of scanning lines, each of the pixel portions including a series circuit which has a light-emitting element and a driving element; and

a display controller, in accordance with an input image signal, for sequentially designating one scanning line of the plurality of scanning lines in predetermined intervals, supplying a scanning pulse to the one scanning line, and supplying a data signal representative of a light-emission luminance onto at least one data line of the plurality of data lines in a scanning period when the scanning pulse is supplied to the one scanning line;

wherein each of the pixel portions has

a holding device which holds the data signal, and

a pixel controller which activates the driving element in accordance with the data signal held in the holding device, to supply a drive current at a level corresponding to the data signal to the light-emitting element; and

wherein the display controller has

a drive current detector which detects the drive current in the scanning period, and

a data correcting device which corrects the data signal held in the holding device such that the drive current detected in the scanning period by the drive current detector becomes equal to a current level corresponding to a light-emitting luminance represented by the data signal.

5. A display device according to claim 4, wherein the display panel has

a reference potential line connected to one ends of the series circuit of the plurality of pixel portions,

a first power line to which a power voltage is applied with the reference potential line, and

a second power line which is provided for each of the plurality of data lines and to which, with the reference potential line, a voltage equal to the power voltage is applied by the current detector;

wherein the holding device has a capacitor;

wherein the driving element is a first field-effect transistor having a gate and a source between which the capacitor is connected;

wherein the light-emitting element is an organic electroluminescent element having an anode connected to a drain of the first field-effect transistor and a cathode connected to the reference potential line;

wherein the pixel controller has

a second field-effect transistor having a gate connected to the scanning line on a corresponding row of the plurality of scanning lines, a source connected to the data line on a corresponding column of the plurality of data lines and a drain connected to the gate of the first field-effect transistor,

a third field-effect transistor having a gate connected to the scanning line on the corresponding row, a source connected to the second power line on the corresponding column and a drain connected to a source of the first field-effect transistor, and

a fourth field-effect transistor having a gate which is at a level inverted of a level on the gate of the third field-effect transistor, a source connected to the first power line and a drain connected to the source of the first field-effect transistor; and

wherein the drive current, in the scanning period, is supplied to the organic electroluminescent element through the second power line on a corresponding column, a source-to-drain of the third field-effect transistor and a source-to-drain of the first field-effect transistor, while the drive current, in other than the scanning period, is supplied to the organic electroluminescent element through the first power line, a source-to-drain of the fourth field-effect transistor and the source-to-drain of the first field-effect transistor.

6. A display device according to claim 4, wherein the drive current detector includes a source-follower power source section which outputs the drive current at a voltage equal to a power voltage to be applied to the pixel portion, and a current mirror circuit which serves as a current source for the drive current to be outputted by the source-follower power source section and outputs a mirror current equal to the drive current as a detection drive current.

7. A display device according to claim 4, wherein the data correcting device includes:

a difference current detector which detects a difference current between the drive current detected by the drive current detector and a predetermined current,

a correcting-voltage generator which outputs a correcting voltage to decrease the difference current, and

a supply device which supplies the correcting voltage to the pixel controller through the data line on the corresponding column.

8. A method for driving an active type of display panel having a plurality of data lines arranged in columns, a plurality of scanning lines arranged in rows to intersect with the plurality of data lines, and pixel portions arranged at respective intersections between the plurality of data lines and the plurality of scanning lines, each of the pixel portions including a series circuit which has a light-emitting element and a driving element, the driving method comprising the steps of:

in accordance with an input image signal, sequentially designating one scanning line of the plurality of scanning lines in predetermined intervals, supplying a scanning pulse to the one scanning line, and supplying a data signal representative of a light-emission luminance onto at least one data line of the plurality of data lines in a scanning period when the scanning pulse is supplied to the one scanning line;

holding the data signal in each of the pixel portions;

activating the driving element in accordance with the held data signal, to supply a drive current at a level corresponding to the data signal to the light-emitting element;

detecting the drive current in the scanning period, and

correcting the held data signal such that the drive current detected in the scanning period becomes equal to a current level

corresponding to a light-emitting luminance represented by the data signal.